

BOOK REVIEW

HÅKAN RYDIN and JOHN K. JEGLUM. 2006. **The Biology of Peatlands**. Oxford University Press (ISBN 0-19-852872-8, pbk.). Oxford University Press, 2001 Evans Road Cary, NC 27513, U.S.A. (**Orders:** 800-451-7556; <http://www.oup.com/us/>). \$49.50, b/w figures and photographs, tables, graphs, and glossary, 343 pp., 6 1/4" × 9 1/4".

The Biology of Peatlands by authors Rydin and Jeglum is part of Oxford's Biology of Habitats series and offers readers a fantastic and comprehensive introduction to Peatlands. This is a well-illustrated book with many text-summarizing and research-related illustrations. This book would be very suitable as a textbook for classes on peatlands or as a supplemental reading for exploring wetland habitats. Additionally, this title could also be a beneficial reference text for classes such as agronomy, hydrology or forestry.

The book chapters flow well from one to another in a logical order building on previous chapters' information. Chapter topics include (1) Peatland habitats, (2) Diversity of life in peatlands, (3) Adaptations to the peatland habitat, (4) Sphagnum - the builder of boreal peatlands, (5) Peat and organic soil, (6) The peat archives, (7) Peatland succession and development, (8) Hydrology of peatlands, (9) Nutrients, light, and temperature, (10) Peatland patterns and landforms, (11) Peatlands around the world, (12) Productivity and carbon balance and (13) Uses, functions, and management of peatlands.

The text is very readable and is accompanied by many supportive illustrations, graphs and charts. The authors' beginning chapters provide an introduction to terminology associated with peatlands which will help the reader both distinguish potentially confusing terminology and determine the relationship of peatland to other wetlands types. These opening chapters also give the reader an overview of common plants and animals associated in peatlands as well as special adaptations of these organisms to living in various peatland types. Chapter four focuses specifically on the life cycle, morphology, physical attributes, chemical attributes and the colonization ability of Sphagnum mosses.

All chapters are steeped with references to pertinent scientific studies. These references allow readers to learn more about methodology, data and results from such studies. The middle chapters of the book focus on peatland organic soils, hydrology including peat physical and chemical properties, peat as historical, fossil "archives," detailed explanations of the processes involved in peatland succession and development, descriptions of water flows, balances in peatland types and the roles of nutrients, light and temperature in peatlands. The hydrology chapter includes a wonderful discussion of the variations in water chemistry along bog-rich fen gradients. This discussion contains information from recent research studies on the subject and includes a summary chart of the surface water chemistry of various peatland sites. Within chapter nine is a wonderful example of research regarding forestry uses of peatlands in a discussion of "nutrients after drainage for forestry"; again the authors have presented many supportive research references in the discussion.

The final chapters discuss peatland patterns and formations, peatlands around the world, peatland production and carbon balance, peatland uses, peatland function and peatland management. These final chapters use the information from previous chapters to explain many areas of peatland ecology and hydromorphology. The peatland landforms section has a helpful subsection on mire descriptions and classifications at different scales including a summary table and detailed description of mire features, sites and types. Many descriptive photographs accompany this discussion of mire types. The authors have focused this text on northern peatlands, but they do include sections contributed from other authors on peatlands in Argentina, New Zealand, and southeast Asia. Peatland biomass and productivity as well as peatland uses, function and management, tie together much of what has been covered in previous chapters with many applications to other related fields. The productivity information is loaded with methodology on how to examine peatland productivity and various parts of the carbon cycle within peatlands, as well as a presentation of information on peat accumulation and limitations in accumulation. The last chapter has many applications of peatland products, management and information relating to peat sustainability and uses in fields such as forestry, fuel use, horticulture and as a de-pollution substrate.

The Biology of Peatlands by authors Rydin and Jeglum provides a comprehensive overview to peatlands biology, ecology and peatland types. This book is full of supportive black and white illustrations, charts, tables and references to research studies. *The Biology of Peatlands* would serve as an excellent textbook for classes focusing on peatlands, wetland habitat types, and related classes where peatland products may be of interest.—Lee Luckeydoo, Herbarium, Botanical Research Institute of Texas, 509 Pecan Street, Fort Worth, TX 76102-4060, U.S.A.